

CLAIMS:

1. A grinding machine for use in grinding materials, the grinding machine comprising: a grinder assembly for receiving material therein; at least one removable hopper attachable proximate to the grinding assembly for dispensing material to the grinder assembly; a passage defined in the hopper being cooperatively placed in communication with the grinding assembly for dispensing material from the hopper to the grinder assembly; a displaceable shutter being positionable in an open position when the hopper is placed on the grinder assembly being positionable in an open position when the hopper is placed on the grinder assembly and being positionable in a closed position when the hopper is removed from the grinder assembly; and a slide gate mechanism including a slide gate and a mover linked to the slide gate for controllably opening and closing passage of material from the hopper to the grinder assembly for grinding material therein.

2. A hopper for use with a grinder assembly to retain and dispense material from the hopper to a grinder assembly, the hopper including at least one side wall defining a cavity therein, at least one passage defined in the hopper for passing material from the hopper to a grinding mechanism, a shutter slidably retained on the hopper for covering the passage to prevent material from flowing out of the hopper when the hopper is removed from a grinder assembly, the shutter defining an aperture which is displaceably aligned with the passage in the hopper when the hopper is positioned on the grinder assembly to maintain the hopper in an open dispensing configuration while positioned on the grinder assembly.

3. A method of grinding material, the method comprising the steps of:
providing a grinder assembly;
providing at least one hopper;
providing a passage defined on the hopper for dispensing material therethrough;
providing a shutter on the hopper;
providing an aperture defined in the shutter;

- positioning the hopper on the grinder assembly;
- shifting the shutter from a closed position to an open position;
- aligning the aperture with the passage when placing the hopper on the grinder assembly.

4. A method of selectively grinding food substances, the method comprising the steps of:

- providing a grinder assembly;
- providing a plurality of hoppers for retaining the food substance therein;
- providing a passage in the hopper for dispensing food substance therefrom to the grinder assembly;
- providing a shutter displaceably attached to the hopper proximate the passage for covering the passage to prevent dispensing of food substance from the hopper when the hopper is removed from the grinder assembly;
- providing an aperture in the shutter that is alignable with the passage for dispensing food substance from the hopper when the hopper is placed on the grinder assembly;
- selectively placing one of the plurality of hoppers on the grinder assembly for dispensing food substance from the hopper for grinding;
- selectively removing a hopper from the grinder assembly; and
- selectively placing one of the plurality of hoppers on the grinder assembly for dispensing of a different food substance therefrom to the grinder assembly for grinding.

5. A substance dispensing machine comprising:

- a dispensing control unit for controllably dispensing a quantity of substance;
- at least one substance retaining hopper for retaining a quantity of substance;
- at least one wall of the hopper defining a cavity therein;
- a passage defined in the hopper;

a shutter operatively attached to the hopper;
an aperture defined in the shutter for alignment with and displacement away from the passage, alignment of the aperture and passage allowing substance to be dispensed from the hopper to the substance dispensing control unit;
placement of the hopper on the substance dispensing control unit, positioning the aperture in alignment with the passage to provide a normally open condition with the hopper on the substance dispensing control unit; and
removal of the hopper from the substance dispensing control unit, displacing the shutter to move the aperture out of alignment with the passage for covering the passage with a portion of the shutter.

6. A method of positioning a hopper on a grinder and removing the hopper from the grinder, the method comprising the steps of:

providing a grinder assembly having an open top assembly;
providing at least one hopper;
positioning the hopper on the open top assembly by moving the hopper in a non-vertical position.

7. The method according to claim 6 further comprising the step of moving the hopper in a generally horizontal position to locate the hopper on the open top assembly of the grinder assembly.

8. A grinding machine for controllably dispensing and grinding coffee beans, the grinding machine comprising:

a grinder assembly;
at least one hopper for use with the grinding assembly;
an open top assembly on the grinder assembly for receiving the hopper thereon;
at least one wall of the hopper defining a cavity of the hopper;
a passage defined on the hopper for passing coffee beans retained in the cavity to the grinder assembly;

a shutter displaceably carried on the hopper proximate to the passage;
the shutter being positionable in a closed position when the hopper is removed from the grinder assembly;

the shutter defining an aperture therethrough being displaceably alignable with the passage for dispensing coffee beans therethrough when the hopper is positioned on the grinder assembly, the aperture of the shutter and the passage of the hopper being aligned to an open position to allow passage of coffee beans therethrough when the hopper is placed on the grinder;

a magnetic assembly relatively associated with the shutter and the hopper for facilitating and retaining the shutter in a configuration with a portion of the shutter covering the passage when the hopper is removed from the grinder assembly.

9. A method of providing information on a hopper for use with a grinder assembly, the method comprising:

providing a grinder assembly;
providing a hopper for dispensing substance to the grinder assembly;
providing on the hopper a component for retaining information;
providing on the grinder assembly a device for reading information from the component carried on the hopper;
reading information from the chip by use of the reader on the grinder assembly; and
processing information from the chip.

10. A hopper for use with a grinder assembly, the hopper being displaceable on an open top assembly of a grinding assembly, the handles provided on a front face of the hopper for gripping when placing the hopper on the open top assembly in a non-vertical direction.